

# Nasdaq CTA US Artificial Intelligence and Robotics Index<sup>SM</sup> Methodology

## Index Description

The Nasdaq CTA US Artificial Intelligence and Robotics Index is designed to track the performance of companies listed in the US that are engaged in the artificial intelligence and robotics segment of the technology, industrial, medical and other economic sectors. The Index includes companies in artificial intelligence or robotics that are classified as either enablers, engagers or enhancers.

## Index Calculation

The Nasdaq CTA US Artificial Intelligence and Robotics Index is an equal weighted index. The value of the Index equals the aggregate value of the Index share weights, also known as the Index Shares, of each of the Index Securities multiplied by each such security's Last Sale Price<sup>1</sup>, and divided by the divisor of the Index. The divisor serves the purpose of scaling such aggregate value to a lower order of magnitude which is more desirable for reporting purposes. The Index began on July 16, 2018, at a base value of 1000.00.

The formula for index value is as follows:

$$\text{Aggregate Adjusted Market Value/Divisor}$$

The formula for the divisor is as follows:

$$(\text{Market Value after Adjustments/Market Value before Adjustments}) \times \text{Divisor before Adjustments}$$

Three versions of the Index are calculated in USD:

- The price return index (Nasdaq: NQROBOUS) is ordinarily calculated without regard to cash dividends on Index Securities.
- The total return index (Nasdaq: NQROBOUST) reinvests cash dividends on the ex-date.
- The net total return index (Nasdaq: NQROBOUSN) reinvests cash dividends on the ex-date and adjusts for an Index Security's country of incorporation withholding rate.

All Indexes reflect extraordinary cash distributions.

The Indexes are calculated and disseminated once per second from 9:30:01 to 17:16:00 Eastern Time (ET) in USD. The closing value of the Index(es) may change up until 17:15:00 ET due to corrections to the Last Sale Price of the Index Securities.

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<sup>1</sup> For purposes of this document, Last Sale Price refers to the last regular way trade reported on such security's Index Market. The Index Market is the listing market for which prices are received and used by Nasdaq in the Index calculation and generally will represent the most liquid trading market of the Index Security. If a security does not trade on its Index Market on a given day or the Index Market has not opened for trading, the most recent last sale price from the Index Market (adjusted for corporate actions, if any) is used. For securities where Nasdaq is Index Market, the Last Sale Price may be the Nasdaq Official Closing Price (NOCP) when Nasdaq is closed.

## **Eligibility**

Index eligibility is limited to specific security types only. The security types eligible for the Index include common stocks, ordinary shares, depositary receipts (both American and Global), depositary shares, shares of beneficial interest or limited partnership interests and tracking stocks.

## **Eligibility Criteria**

To be included in the Index, a security must meet the following criteria:

- be included in the Nasdaq CTA Artificial Intelligence and Robotics Index (NQROBO) [https://indexes.nasdaqomx.com/docs/methodology\\_NQROBO.pdf](https://indexes.nasdaqomx.com/docs/methodology_NQROBO.pdf);
- be listed on the Nasdaq Stock Market, the New York Stock Exchange, NYSE American, or the CBOE Exchange;
- one security per issuer is permitted<sup>2</sup>;
- may not have entered into a definitive agreement or other arrangement which would likely result in the security no longer being Index eligible; and
- may not be issued by an issuer currently in bankruptcy proceedings.

## **Index Evaluation**

The Index Securities are evaluated semi-annually in March and September. The above Eligibility Criteria are applied using market data through the end of January and July respectively.

Security additions and deletions are made effective after the close of trading on the third Friday in March and September respectively.

Additionally, if at any time during the year other than the Evaluation, an Index Security no longer meets the Eligibility Criteria, or is otherwise determined to have become ineligible for inclusion in the Index, the security is removed from the Index and is not replaced. In all cases, a security is removed from the Index at its Last Sale Price. If, however, at the time of its removal the Index Security is halted from trading on its primary listing market and an official closing price cannot readily be determined, the Index Security may, in Nasdaq's discretion, be removed at a zero price. The zero price will be applied to the Index Security after the close of the market but prior to the time the official closing value of the Index is disseminated, which is ordinarily 17:16:00 ET.

## **Index Maintenance**

Index Share changes are not made during the quarter however changes arising from stock dividends and stock splits are made to the Index on the evening prior to the effective date of such corporate action. In the case of certain spin-offs or rights issuances, the price of the Index Security is adjusted and a corresponding adjustment is made to the Index Shares such that the weight of the Index Security does not change as a result of the action. However, for a spin-off event, if there is a no when-issued trading available for the spin-co security, the spin-co security may be added to the index at a zero value. In this case, the spin-co security will be removed from the Index after two full days of trading.

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<sup>2</sup> If an issuer has multiple securities, the security with the highest dollar trading volume will be selected for possible inclusion into the Index.

A special cash dividend announced by the listing exchange, will result in an adjustment to the Last Sale Price of an Index Security prior to market open on the ex-date for the special amount distributed. A corresponding adjustment will be made to the Index Shares of the security such that the weight of the Index Security will not change as a result of the action. A special dividend may also be referred to as extra, extraordinary, non-recurring, one-time, unusual, etc.

Ordinarily, whenever there is a change in Index Shares, a change in an Index Security or a change to the price of an Index Security due to spin-offs, rights issuances or special cash dividends as mentioned above, the divisor is adjusted to ensure that there is no discontinuity in the value of the Index which might otherwise be caused by any such change.

### **Index Rebalancing**

The Index employs an equal-dollar weighting methodology such that each company's Index market value is rebalanced to an equal-dollar value corresponding to an equal percent weight of the Index's aggregate market value. Index Shares are calculated by dividing this equal-dollar value for each Index Security by the corresponding Last Sale Price of the security at the close of the last trading day on the third Friday in March, June, September, and December.

Nasdaq may, from time to time, exercise reasonable discretion as it deems appropriate in order to ensure Index integrity.

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